STREET OPERATION: LOW DENSITY ENVIRONMENT

Purpose

The purpose of this lesson is to allow students to transfer basic operating skills acquired within an off-street area to the highway traffic environment. It provides students an opportunity to gain the proficiency and confidence needed before they can begin to apply the safe operating practices taught later in this Curriculum.

Location -- On Street

Routes

The routes selected for this lesson should provide students an opportunity to practice basic vehicle operation with a minimum of stress from roadway and traffic conditions. The following requirements should be fulfilled to the extent possible.

Environment -- Suburban areas are generally most appropriate. Rural areas are acceptable if accessible to the school. Urban areas with heavy traffic, should be avoided at this stage.

Density -- This lesson should begin on routes with virtually no other traffic, progressing to routes that provide a limited amount of traffic.

Situations -- The routes selected should expose drivers to controlled and uncontrolled intersections, freeway interchanges, hills and long grades.

Directions

Duration -- The duration of actual driving should be limited to 10 minutes at first. Most students will be nervous about operating in traffic and will therefore tire quickly. Where possible rotate students every 10 minutes in the beginning to maintain the highest possible level of learning.

Maneuvers -- Students should be directed to perform the following maneuvers:

- Left and right turns
- Lane changes
- Negotiating curves

Observers -- Observer students (if any) should be required to fill out The Basic Control Checklists provided.

Critiques -- Instructors and observers will provide critiques of the driver's performance.

Assistance -- To allow students to concentrate their attention upon vehicle handling, instructors should provide assistance to the students by:

- Reminding them to shift gears if necessary
- Reminding them to signal and cancel signals
- Warning them as to potential hazards, excess speed, insufficient clearance and safety margins
- Directing them around areas of congestion, low overhead or lateral clearance, reversible traffic lanes, and potential hazards from other road users

Weather -- Students should experience their first street lesson under favorable weather conditions.

Observations

Instructor and student should note and record errors in basic vehicle control using checklists provided. Errors to be recorded are as follows:

Acceleration -- Jerky, abrupt accelerations, both from a standing start and when increasing speed.

Braking -- Lurching as the vehicle comes to a stop.

Stopping Point -- Coming to a stop beyond the stop line or other designated stopping point.

Upshifting (manual transmission)

- Stalling
- Operating out of the designated rpm range
- Lugging
- Slipping the clutch
- Waiting too long to shift up
- Overrevving between gears
- Delayed shift between gears (losing too many rpm)
- Missed shift (having to drop back into original gear)
- Gear clash

Downshifting (manual transmission)

- Allowing engine speed to exceed or fall short of designated rpm range
- Gear/engine mismatch resulting in lurch as clutch is released
- Delayed shift
- Gear clash

Uphill Operation

- Lugging (failure to shift soon enough) (manual transmission)
- Excessive loss of speed
- Rolling back when starting on an incline
- Stalling the engine when starting on an incline (manual transmission)
- Excessive clutch slipping, particularly at high RPM when starting on an incline (manual transmission)

Downhill Operation

- Starting down the hill in too high a gear
- Failing to maintain steady brake pressure (e.g., fanning)
- Building up excessive speed due to gravity

Speed Adjustment/Curves -- Excessive speed in entering turn or at an intersection, is indicated by:

- Sharp lateral acceleration
- Braking while in the curve or turn

Lane Keeping/Straight -- Touching or crossing lane marking when operating in a straight line.

Lane Keeping/Curve -- Touching or crossing lane marking while in curve.

Lane Keeping/Turn -- Operating outside of the designated lane while in a turn.

Right Turn

Left front wheel touching or crossing lane marking

Right rear wheels cutting across curb or road edge

Left Turn

Beginning left turn too early (cutting across lanes approaching from the left)

Right front wheel crossing lane marking

STREET OPERATION: MODERATE DENSITY ENVIRONMENT

Purpose

The purpose of this lesson is to permit students to acquire confidence and proficiency in coping with the highway-traffic environment under conditions of moderate traffic.

Location -- On street

Routes

The routes selected for this lesson would be similar to those used in the previous lesson except that the areas and hours of the day would be selected to create a moderate amount of traffic.

Directions

The procedure employed in this lesson is identical to that of the previous lesson except for the following:

Duration -- The duration of each behind-the-wheel session may be increased to 15 minutes.

Assistance -- While instructors should be prepared to provide the type of assistance described in the earlier lesson, the student's need for it should decrease.

Observation

The observation made in this lesson and the checklist used would be the same as those of the previous lesson.

BASIC CONTROL CHECKLIST

If a driver makes a driving error in one of the categories blow, place a ally mark in the box.

BASIC CONTROL ERRORS	Driver #1	Driver #2	Driver #3
Acceleration *(jerky, abrupt. From standing or while moving)*			
Braking *(lurching to a stop)*			
Stopping *(Overshooting stop line)*			
Upshifting*(Stalling, lugging, overrevving, missing shift etc.)*			
Downshifting (*Gear/engine mismatch, clashing gears, etc.*)			
Uphill Operation *(Roll back, stalling, excessive speed loss, etc.)*			
Downhill Operation *(Building up excessive speed)*			
Speed Adjustment/Curves *(Entering too fast, braking in turn)*			
Lane-keeping/Straight *(Touching or crossing lane marking)*			
Lane-keeping/Turn *Operating outside designated lane)*			
Lane-keeping/curve *(Touching or crossing lane marking)*			

SEARCH ACTIVITY: LOW DENSITY TRAFFIC

Purpose

The purpose of this activity is to allow students to apply search practices in a street environment relatively free from other traffic.

Location -- On street

Route

The route to be employed in this lesson should expose the student to a broad range of roadways under low density traffic conditions. The student's relative lack of experience in operating on-street, in the presence of other traffic, could produce distraction and anxiety. Since practice of search activities is not dependent upon the presence of other road users, the lack of traffic will not prevent attainment of objectives. At a minimum, the route should include the following:

Path obstructions that force a change in speed or direction, and which are observable at a distance (e.g., traffic lights, lane drops, barricades).

Intersections at which right/left turns may be made.

Blind intersections (side traffic concealed by trees, buildings, etc.) at which the driver both has and must yield the right-of-way.

Multi-lane streets that permit lane changes to be made.

Freeway interchanges, including weave-type interchanges (used to enter, exit, and traverse).

Lane turns, such as alleys or driveways.

Directions

In addition to the general practices for on-street sessions described in the Introduction, this lesson will employ the following procedures:

- The students will operate for no more than twenty minutes at a time. Because of their lack of on-street experience and the intensity of the activity involved, long periods behind the wheel are likely to be fatiguing.
- For each twenty-minute session, driving students will devote from 1/4 to 1/2 the time employing commentary driving techniques to describe potential hazards. The instructor and observer students will use the information to assess the driver's search pattern.
- Instructions involving changes of speed or direction will be given well in advance of a maneuver in order that the instructions themselves will not serve as a cue for required search behavior.
- The instruction will direct the students to perform the following specific maneuvers at various points along the route:
  - Lane change: This is best done by alternating turns onto and off of a multi-lane road, e.g., a left turn followed by a right turn. The instructor should not have to request a lane change, thereby cueing search behavior.
  - Tight turn: The student should be instructed to turn into a driveway or alley in order to force a speed reduction where following traffic would not ordinarily expect it.
  - Right and left turns, at controlled and uncontrolled intersections, both having and yielding right-of-way.
  - Entering, leaving, and traversing freeway interchanges.

Observations

The instructor and observer students will observe and record driver errors in basic control and search activity using the checklists provided. Each error will be recorded by placing a checkmark next to the behavior that was performed incorrectly.

Since the driver's search behavior cannot be observed directly, it must be inferred from one or more of the following:

Commentary -- Student descriptions of potential hazards should be used only as a way of determining where students are looking, not what they are seeing. For example, a student preparing to make a left turn may correctly identify on-coming vehicles as a potential hazard but be in error for not searching the path to the left.

Eye/Head Movements -- Search behavior that requires movement of the driver's eyes and/or head may be observed by the instructor and observers through an eye-movement mirror. If there is no mirror available, or if observers cannot see the mirror, their observations would be restricted to those students behaviors that require head movement.

Speed/Direction Changes -- The driver's response to a situation in the path ahead that requires a change in speed and/or direction is an indication that the situation has been observed. Failure to respond does not necessarily indicate driver error since driver may have observed the situation and not recognized it as requiring action. However, it should be treated as a possible error to be discussed later in the critique of student performance.

The error categories described on the instructor and student checklists are as follows:

Distance Scanning -- Failure to respond to a visible requirement for a speed or direction change, at least 12 seconds in advance. Situations would include the following:

- Red light
- Lane drop
- Red flashing light
- Barricade or other obstruction
- Warning sign
- Parked vehicle (in travel lane)

Turn Path -- Failure to search the path ahead in a right or left turn.

Roadside Scanning -- Failure to respond to signs over or alongside the road, including:

- Posted speed limits
- lane control signs and signals
- Warning signs

Blind Intersection, Privileged -- Failure to slow and search for cross traffic when approaching a blind intersection as the "privileged" vehicle (having the right-of-way).

Blind Intersection, Burdened -- Failure to move to a position where cross traffic can be seen when stopped at a blind intersection as the "burdened" vehicle (the vehicle that must yield the right-of-way).

Mirror Usage, General -- Failure to observe rear-view mirror at least every ten seconds.

Mirror Usage, Slowing -- Failure to check rear-view mirror before slowing where following drivers would not anticipate it (e.g., tight turn, parallel parking).

Mirror Usage, Lane Change -- Failure to use the rear-view and check blind spot in the direction the lane change is to be made before initiating the lane change.

Mirror Usage, Merge -- Insufficient or excessive monitoring of mirrors prior to merging onto a highway from an access or acceleration lane.

INSTRUCTIONS FOR COMMENTARY DRIVING

- Identify any hazard, i.e., any road condition or road user that is a potential threat and which requires a response.
- Describe the hazard in a few words, identify it by nature and location--e.g.:

  "Child in the street on the left."

  "Yellow Volkswagen on the right."

  "Pavement in the shade of that culvert."

- Identify in a few words what makes it a hazard--e.g.:

  "Is looking the other way."

  "Is going to back up."

  "Is likely to be very slippery."

  "May be forced into my lane."

- Identify only those hazards which require some type of response. If no response is required, it is not a hazard. Students need not describe how they are responding.
- When there is no hazard, say nothing. There is no need to announce the absence of a hazard, e.g., "clear path."
- In conflict situations, students need only comment on the vehicle in conflict with their vehicle. They do not need to comment on the situation or third vehicle that puts the vehicle in conflict with their vehicle.

Examples

Driver Looking to the Side

"Oncoming driver may turn across my path"

Anticipatory Movement

"Car on right may enter my lane"

Merge Conflict

"Car on right may be forced into my path"

Intersecting Conflict

"Car ahead may be forced to stop quickly"

SEARCH ACTIVITY: MODERATE DENSITY TRAFFIC

Purpose

The purpose of this activity is to allow students to apply search practices under traffic conditions requiring a moderate degree of attention-sharing.

Location -- On street.

Route

The route employed in this lesson should expose students to the same range of conditions described in the previous activity. However, the routes selected should be characterized by moderate volume of traffic. At this point in the curriculum, high density (e.g., rush hour) traffic should be avoided in order to not to impose a burden with which the student is not yet prepared to cope, and in order to avoid long traffic delays.

Directions and Observations

The procedures employed in carrying out the activity, and the observations of driver performance to be made are the same as those described in SEARCH ACTIVITY: LOW DENSITY TRAFFIC. The same instructor and student checklists may be used

VISUAL SEARCH CHECKLIST

If a driver makes a driving error in one of the categories below, place a tally mark in the box.

BASIC CONTROL ERRORS	Driver #1	Driver #2	Driver #3
Acceleration			
Braking			
Stopping			
Upshifting			
Downshifting			
Uphill operation			
Downhill operation			
Speed adjustment/curves			
Lane-keeping/straight			
Lane-keeping/turn			
VISUAL SEARCH			
Distance scanning			
Turn path search			
Roadside scanning			
Blind intersection, privileged			
Blind intersection, burdened			
Mirror usage, general			
Mirror usage, slowing			
Mirror usage, lane change			
Mirror usage, merge			

An explanation of errors on the Visual Search Checklist is provided on the next page.

EXPLANATION OF DRIVER ERRORS ON VISUAL SEARCH CHECKLIST

Distance Scanning -- Failure to respond to a visible requirement for a speed or direction change, at least 12 seconds in advance. Situations would include the following:

- Red light
- Lane drop
- Red flashing light
- Barricade or other obstruction
- Warning sign
- Parked vehicle (in travel lane)

Turn Path Search -- Failure to search the path ahead in a right or left turn.

Roadside Scanning -- Failure to respond to signs over or alongside the road, including:

- Posted speed limits
- Lane control signs and signals
- Warning signs

Blind Intersection, Privileged -- Failure to slow and search for cross traffic when approaching a blind intersection as the privileged vehicle (having the right-of-way)

Blind Intersection, Burdened -- Failure to move to a position where cross traffic can be seen when stopped at a blind intersection as the "burdened" vehicle (the vehicle that must yield the right-of-way).

Mirror Usage, General -- Failure to observe rear-view mirror at least every ten seconds.

Mirror Usage, Slowing -- Failure to check rear-view mirrors before slowing where following drivers would not anticipate it (e.g., tight turn, parallel parking).

Mirror Usage, Lane Change -- Failure to use the rear-view and side view mirror and check blind spot in the direction the lane change is to be made before initiating the lane change.

Mirror Usage, Merge -- Insufficient or excessive monitoring of mirrors prior to merging onto a highway from an access or acceleration lane.

COMMUNICATION ACTIVITY

Purpose

The purpose of this activity is to allow students to apply communication practices within the highway traffic environment.

Location -- On street.

Route

The route chosen for this lesson should permit the maneuvers described in earlier street lessons. However, a greater number of turns and lane changes should be called for in order to provide opportunities for both greater use of turn signals and practice in performing turning maneuvers. Alternating right and left turns onto and off of multi-lane roads provides opportunities to turn and neces sitates lane changing maneuvers.

Directions

No special procedures beyond those described in the Introduction are required.

Observations

Student and instructor should observe and record errors in carrying out basic control, search and communication behaviors using the checklists provided. Communication errors are as follows:

Signaling Turns -- errors in signaling right and left turns at intersections

None -- Failure to activate the signal at any point in the turn

Late -- Failure to activate the signal before reaching the intersection

Early -- Misleading other road users by an early signal

Lane Changing -- Errors in signaling lane changes.

Signalling

None -- Failure to activate the signal at any point in the lane change

Late -- Failure to activate signal soon enough before starting lane change

Inappropriate -- Signaling a lane change when there is no gap to move into and enough time to wait for a gap to appear.

Position -- Failure to use vehicle position to communicate intention to change lanes

Canceling signal -- Failure to cancel a signal properly

Late -- Canceling more than 5 seconds after a lane change is completed

Early -- Canceling the signal while still in the process of changing lanes

Flashers -- Failure to activate emergency flashers when slowing or stopped as provided for by State law (see code of Iowa, sec.321.317(5))

Brake Lights --Failure to flash brake lights when slowingor stopping unexpectedly, including:

- Stalled traffic ahead
- Mid-block (e.g., alley)
- Prior to parallel parking

Use of Horn -- Errors in using horn

Insufficient -- Failure to use horn under appropriate circumstances

Improper -- Using the horn improperly (e.g., to express anger)

Interpreting Communication -- Errors involving recognition and interpretation of communication from others.

Receiving -- Failure to react and adjust to communications of others

Misinterpreting -- Misinterpreting communications from others reacting accordingly

Students should also note signalling lapses of other drivers as they occur, and comments upon the hazard they represent to other road users.

COMMUNICATIONS CHECKLIST

If a driver makes a driving error in one of the categories below, place a tally mark in the box.

BASIC CONTROL	#1	#2	#3
Acceleration			
Braking			
Stopping			
Upshifting			
Downshifting			
Uphill Operation			
Downhill Operation			
Speed Adjustment/Curves			
Lane-Keeping/Straight			
Lane-Keeping/Turn			

VISUAL SEARCH	#1	#2	#3
Distance Scanning			
Turn Path Search			
Roadside Scanning			
Blind Intersect.,Priv.			
Blind Intersect, Burd.			
Mirror Usage, General			
Mirror Usage, Slowing			
Mirror Usage, Merge			
Mirror Usage,Lane Ch.			

COMMUNICATION	#1	#2	#3
Signaling Turns: None			
Late			
Early			
Lane Changing: Signaling			
None			
Late			
Inappropriate			
Lane Changing: Position			
Late			
Early			
Lane Changing: Canceling			
Late			
Early			
Flashers			
Brake Lights			
Use of Horn:			

An explanation of errors of the Communications Checklist is provided on the next page.

EXPLANATION OF ERRORS ON COMMUNICATIONS CHECKLIST

Signaling Turns -- errors in signaling right and left turns at intersections

None -- Failure to activate the signal at any point in the turn

Late -- Failure to activate the signal before reaching the intersection

Early -- Misleading other road users by an early signal.

Lane Changing -- Errors in signaling lane changes.

Signaling

None -- Failure to activate the signal at any point in the lane change

Late -- Failure to activate signal soon enough before starting lane change

Inappropriate -- Signaling a lane change when there is no gap to move into and enough time to wait for a gap to appear.

Position -- Failure to use vehicle position to communicate intention to change lanes

Changing signal -- Failure to cancel a signal properly

Late -- Canceling more than 5 seconds after a lane change is completed

Early -- Canceling the signal while still in the process of changing lanes

Flashers -- Failure to activate emergency flashers when slowing or stopped as provided for by State law.

Brake Lights -- Failure to flash brake lights when slowing or stopping unexpectedly, including:

- Stalled traffic ahead
- Mid-block (e.g., alley)
- Prior to parallel parking.

Use of Horn -- Errors in using horn

Insufficient -- Failure to use horn under appropriate circumstances

Improper -- Using the horn improperly (e.g., to express anger).

Interpreting Communication -- Errors involving recognition and interpretation of communication from others

Receiving -- Failure to react and adjust to communications of others

Misinterpreting -- Misinterpreting communications from others reacting accordingly.

MANAGING SPACE

Purpose

The purpose of this activity is to allow students to apply space management practices within the highway traffic environment.

Location -- On street

Route

The route chosen for this lesson should permit the maneuvers described in earlier street lessons. However, greater traffic density is both permitted by the amount of street operation the student has had prior to this lesson and needed in order to provide opportunities to apply space management principles. The driving environment should include urban areas with traffic or moderate density as well as suburban, rural, and expressway driving.

Directions

In addition to the general procedures used for on-street lessons the following procedure should be used during this lesson:

> Following Distance Illustration -- At various points along the route, the instructor should direct the driver to adopt following distances of 2-4 seconds in order to illustrate the ability to maintain adequate following distances without having large number of other vehicles intrude upon the gap.

In order to avoid hazard to instructor and students and to avoid liability to the school, the instructor must intervene whenever the student's action presents a clear and present danger. Specifically, students should be warned if they are:

- About to accept an inadequate gap.
- Entering a lane from which they are prohibited by law.
- In danger of cutting off another vehicle by a premature lane change.
- In danger of placing the vehicle where it will obstruct traffic.
- Continuing to follow closer than permitted by law.

Observations

Student and instructor should observe and record errors in carrying out basic control, search, communication, and space management behavior using the checklists provided. Space management errors are as follows:

Separation

> Following distance -- Not maintaining a minimum two second following distance
>
> Lateral separation -- Failure to adjust lane position in response to hazards on the right, e.g., parked vehicles, or hazards to the left, e.g., being passed by oncoming or overtaking vehicles.
>
> Passing distance -- Changing lanes too quickly in front of a vehicle that has been passed.

Gaps

> Too close -- Attempting to cross or enter an insufficient gap.
>
> Too far -- Passing up an acceptable opportunity to cross or enter traffic.

Merging

Barging -- Causing a vehicle to alter speed/direction in order to avoid an accident during a merge attempt.

Stopping -- Slowing or stopping when an earlier speed adjustment would have permitted a continuous merge.

Traffic Adjustments

Compromising -- Passing two potential hazards simultaneously when a speed adjustment would have allowed them to be passed in sequence.

Adjacent Operation -- Unnecessarily prolonged operation alongside an adjacent vehicle or vehicles.

SPACE MANAGEMENT CHECKLIST

If a driver makes a driving error in one of the categories below, place a tally mark in the box.

BASIC CONTROL	#1	#2	#3
Acceleration			
BrakingTurn			
Stopping			
Upshifting			
Downshifting			
Uphill Operation			
Downhill Operation			
Speed Adjustment/Curves			
Lane-Keeping/Straight			
Lane-Keeping/Turn			

VISUAL SEARCH	#1	#2	#3
Distance Scanning			
Path Search			
Roadside Scanning			
Blind Intersect.,Priv.			
Blind Intersect, Burd.			
Mirror Usage, General			
Mirror Usage, Slowing			
Mirror Usage, Merge			
Mirror Usage,Lane Ch.			

COMMUNICATION	#1	#2	#3
Signaling Turns: None			
Late			
Early			
Lane Changing: Signaling			
None			
Late			
Inappropriate			
Lane Changing: Position			
Late			
Early			
Lane Changing: Canceling			
Late			
Early			
Flashers			
Brake Lights			
Use of Horn:			
Insufficient			
Improper			
Interpreting Comm.:			
Receiving			
Misinterpreting			

SPACE MANAGEMENT	#1	#2	#3
Separation:			
Following Distance			
Lateral Separation			
Passing Distance			
Gaps:			
Too Close			
Too Far			
Merging:			
Barging			
Stopping			
Traffic Adjustments:			
Compromising			
Adjacent Operation			

An explanation of errors on the Space Management Checklist is provided on the next page.

EXPLANATION OF ERRORS ON SPACE MANAGEMENT CHECKLIST

Separation

Following distance -- Not maintaining a minimum two second following distance

Lateral separation -- Failure to maintain a center lane position when passing parked vehicles, or being passed by oncoming or overtaking vehicles.

Passing distance -- Changing lanes too quickly in front of a vehicle that has been passed.

Gaps

Too close -- Attempting to cross or enter an insufficient gap.

Too far -- Passing up an acceptable opportunity to cross or enter traffic.

Merging

Barging -- Causing a vehicle to alter speed/direction in order to avoid an accident during a merge attempt.

Stopping -- Slowing or stopping when an earlier speed adjustment would have permitted a continuous merge.

Traffic Adjustments

Compromising -- Passing two potential hazards simultaneously when a speed adjustment would have allowed them to be passed in sequence.

Adjacent Operation -- Unnecessarily prolonged operation alongside an adjacent vehicle or vehicles.

APPLICATION OF SAFE OPERATING PROCEDURES

Purpose

The purpose of this lesson is to provide students with an opportunity to (1) develop vehicle handling skills within the street environment, and (2) apply safe operating practices, including search, communication, speed management, space management, and hazard recognition.

Location -- On street.

During this lesson, student should be exposed to the fullest possible range of operating conditions, including the following:

Roads--Students should operate over urban and suburban streets, rural highways, and expressways.

Traffic Conditions--In the first few sessions, traffic density should be relatively low. However, as the lessons continue, students should be exposed to increasingly heavy traffic, including (1) rush hour traffic on main arteries, and (2) midday traffic in urban areas.[1]

Environment--Following the completion of Unit 2.5, students should begin driving under the fullest possible range of environmental conditions.

- Operating on snow or ice, where safe, should be allowable after student has achieved a reasonable amount of on-street experience.
- Weather conditions that are so hazardous as to cause discontinuation of normal driving should also result in stopping on-street training.
- If off-street areas are available, they should be utilized during extremely bad weather to provide practice in maneuvering under conditions of limited traction.

Direction

The general procedures for street lessons, as listed in the Introduction, should be employed with the following exceptions:

1.Instructor and observers should critique driver's while they are driving. By this time, the drivers' vehicle handling skills should be sufficiently developed to permit them to listen to the instructor and observer commentary without adverse affect upon their driving.

2.Extreme care should be exercised to make sure that this lesson does not degenerate into "joyriding" sessions. Without effort by the instructor to keep observers involved, they will not remain actively involved in the driving process. If they are not involved, they will not be learning. And, if they are not learning, there is no point in their being in class.

Observations

The driver performance observed in this lesson should include the total range of behavior dealt with in all other street lessons.

[1] While students should have an opportunity to experience driving in very dense traffic, not much time should be devoted to it as it doesn't provide much opportunity for learning.

SPACE MANAGEMENT CHECKLIST

If a driver makes a driving error in one of the categories below, place a tally mark in the box.

BASIC CONTROL	#1	#2	#3
Acceleration			
BrakingTurn			
Stopping			
Upshifting			
Downshifting			
Uphill Operation			
Downhill Operation			
Speed Adjustment/Curves			
Lane-Keeping/Straight			
Lane-Keeping/Turn			

VISUAL SEARCH	#1	#2	#3
Distance Scanning			
Path Search			
Roadside Scanning			
Blind Intersect.,Priv.			
Blind Intersect, Burd.			
Mirror Usage, General			
Mirror Usage, Slowing			
Mirror Usage, Merge			
Mirror Usage,Lane Ch.			

COMMUNICATION	#1+	#2	#3
Signaling Turns: None			
Late			
Early			
Lane Changing: Signaling			
None			
Late			
Inappropriate			
Lane Changing: Position			
Late			
Early			
Lane Changing: Canceling			
Late			
Early			
Flashers			
Brake Lights			
Use of Horn:			
Insufficient			
Improper			

SPACE MANAGEMENT	#1	#2	#3
Separation:			
Following Distance			
Lateral Separation			
Passing Distance			
Gaps:			
Too Close			
Too Far			
Merging:			
Barging			
Stopping			
Traffic Adjustments:			
Compromising			
Adjacent Operation			

HAZARD RECOGNITION

Purpose

The purpose of this exercise is to expose students to common road and traffic hazards in order to give them an opportunity to assess and broaden their hazard recognition capability.

Location -- On street

It is almost impossible to select routes specifically in terms of the great array of hazards characterized in highway traffic environment--particularly when the majority of them are dependent upon traffic and weather conditions that vary from one moment to the next. However, the following conditions, over all, should provide ample exposure to common hazards:

Road--A variety of road surface conditions and configurations, including:

- Narrow Roads
- Degraded surfaces
- Deteriorating roadside conditions
- Intersections

Traffic--High density traffic conditions, including:

- Parked vehicles
- Pedestrian traffic in the road
- Merge points
- Congested areas
- Buses and taxis

Because of the number of on-street lessons preceding this one, the student should be able to cope with the road and traffic conditions giving rise to common hazards.

Directions

In addition to the general procedures described in the Introduction, the following procedures should be used in this lesson;

Duration--The intensity of effort involved in observing hazards, particularly during commentary driving, can be somewhat fatiguing. Therefore, it is wise to limit each behind-the-wheel stint to 15-20 minutes.

Commentary Driving--Five minutes out of each behind-the-wheel stint should be devoted to use of commentary driving techniques. These procedures will have been introduced in the preced ing lesson, but should be reviewed with students prior to starting the lesson. Instructions for commentary driving are provided at the end of the exercise. "Search Activity: Low Density Traffic".

Identification of Hazards--The instructor should not call students' attention to hazards during driving since it will tend to distract their attention from identification of other hazards. The obvious exception is when a threat to safety exists.

Recording Performance--In contrast with previous street lessons, instructor and observers should record correct responses as well as those that are incorrect. Identification of correct responses will benefit student observers who may not have noticed the hazard or the student's response.

Method of Observation--The driver's recognition of a hazard must be inferred from one of the following observable responses:

Commentary--During the commentary driving phase, the driver's recognition of a hazard will be inferred from the driver's oral commentary.

Control Response--During driving without commentary, instructor and observers can infer hazard recognition by one or more of the following:

___ Changing Speed--Removing the foot from the accelerator, covering the brake, or applying the brake.

___ Changing Direction--Changing lanes or position within lane away from the hazard.

___ Signaling--Tapping the horn or flashing lights.

Observations

The instructor will observe for failure to identify and/or react to hazards. Any potential threat to the safety of the vehicle qualifies as a hazard. The number of hazards is far too large to be identified in this lesson plan or on the Hazard Recognition Checklist. The instructor is referred to the classroom lesson plan for examples of common hazards.

HAZARD RECOGNITION CHECKLIST

During commentary driving, place a tally mark under "Yes" if the driver correctly identifies and describes a hazard. Place a tally mark under "No" if the driver does not correctly identify and describe a hazard.

During on-street driving without commentary driving, use the checklist to indicate whether or not the driver responds correctly to a hazard.

HAZARD RECOGNITION	YES	NO
Road Characteristics		
Surface		
Configuration		
Road User Characteristics		
Obstructed Vision		
Distraction		
Confusion		
Low Speed		
Incapacity		
Road User Activities		
Driver Movement		
Vehicle Movement		
Pedestrians/Cyclists		
Conflicts		
Obstructions		
Merging		
Intersecting		

An explanation of hazards on the Hazard Recognition Checklist is provided on the next page.

EXPLANATION OF CATEGORIES OF HAZARDS ON HAZARD RECOGNITION CHECKLIST

Road Characteristics--Characteristics of the road that provide hazard clues, including:

Surface--Clues to potentially dangerous road surface conditions including slippery surfaces, loose gravel and uneven road surface.

Configuration--Clues to potentially dangerous roadway configuration including sharp curves, dangerous ramps, blind intersections.

Road User Charracteristics--Characteristics of road users that identify them as potential hazards, including:

Obstructed Vision--Clues indicating the inability of a road user to see the student vehicle.

Distraction--Clues indicating that another road user may be distracted and, therefore, unable to devote attention to the student vehicle.

Confusion--Clues that another road user may be confused and, therefore, a candidate for some unexpected action.

Low Speed--Clues indicating that a vehicle ahead is traveling at a speed that would cause the student vehicle to overtake very quickly.

Incapacity--Clues that another driver is unable to respond appropriately to the student vehicle because of intoxication, fatigue, or some other incapacity.

Road User Activities--Activity on the part of any road user that indicates a potentially hazardous course of action, including:

Driver Movement--Any motion on the part of the driver that signals an impending change in speed or direction.

Vehicle Movement--Any motion on the part of the vehicle that signals an impending change in speed or direction.

Pedestrian/Cyclists--Any motion on the part of a pedestrian, bicyclist, or moped rider that signals an impending change in speed or direction.

Conflict--Any vehicle that is on a collision course with an object or other road user, signaling an impending change in speed or direction, including conflicts with:

Obstructions--Roadway configurations with fixed objects in the path of the other vehicle.

Merges--Vehicles merging into the path of the other vehicle.

Intersections--Vehicles intersecting with the road user.